

Title (en)  
AUTOMATIC DISHWASHING DETERGENT

Title (de)  
SPÜLMASCHINENMITTEL

Title (fr)  
DÉTERGENT POUR LAVAGE DE VAISSELLE AUTOMATIQUE

Publication  
**EP 3017031 A1 20160511 (EN)**

Application  
**EP 14766860 A 20140903**

Priority  
• EP 13290210 A 20130905  
• US 2014053856 W 20140903  
• EP 14766860 A 20140903

Abstract (en)  
[origin: WO2015034895A1] Described are automatic dishwashing detergents, comprising a builder, a surfactant, and a polymer comprising units derived from at least one carboxylic acid monomer or its salt, at least one allyl glycidyl ether (AGE) and iminodiacetic acid (IDA), said polymer having Formula I: (Formula I) wherein m; n; R, R1, R2, and X are as defined herein. In some embodiments, an AGE and iminodiacetic acid (IDA) are first reacted to produce an ethylenically unsaturated aminocarboxylic acid monomer, which is then polymerized with at least one carboxylic acid monomer to produce the polymer having Formula I. Alternatively, an AGE is polymerized with at least one carboxylic acid monomer to produce a polymer, which is then reacted to graft IDA thereon to form the polymer having Formula I.

IPC 8 full level  
**C11D 3/37** (2006.01)

CPC (source: EP MX US)  
**C11D 3/0036** (2013.01 - US); **C11D 3/37** (2013.01 - MX); **C11D 3/3769** (2013.01 - EP MX US)

Citation (search report)  
See references of WO 2015034895A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2015034895 A1 20150312**; AU 2014315345 A1 20160407; AU 2014315345 B2 20171207; CN 105531359 A 20160427; CN 105531359 B 20190108; EP 3017031 A1 20160511; EP 3017031 B1 20180321; JP 2016534209 A 20161104; JP 6367949 B2 20180801; MX 2016002709 A 20160714; US 2016201012 A1 20160714; US 9650591 B2 20170516

DOCDB simple family (application)  
**US 2014053856 W 20140903**; AU 2014315345 A 20140903; CN 201480048026 A 20140903; EP 14766860 A 20140903; JP 2016540336 A 20140903; MX 2016002709 A 20140903; US 201414910052 A 20140903